wherein the plant produces HaSV viral particles, and insects feeding on the plant are deleteriously effected.

A8 cont'd

38. (Four times amended) A transgenic plant comprising at least one nucleic acid molecule of claim 10.

REMARKS

Attached hereto is a marked-up version of the changes made to the specification by the current amendment. The attached page is captioned "Version with markings to show changes made." (Appendix A)

Claims 10, 13, 19, 20, 25-28, 30, 31, 37 and 38 are pending. These claims are reproduced in Appendix B attached hereto. A copy of the changes to the claims can be found on the page marked "Version with Markings to Show Changes." (Appendix A)

Entry of these amendments is respectfully requested. The amendments to the specification are made in adherence with 37 C.F.R. § 1.821-1.825. The amendments are accompanied by a request to use the computer readable form from the parent application and a paper copy of the sequence information. The sequence listing information contained in the computer readable form of the parent application is identical to that of the paper copy filed herewith. The amendments contains no new matter. Applicant submits that these amendments, the accompanying request to use the computer readable sequence listing from the parent application, and the paper copy of the sequence listing serve to place this application in a condition of adherence to the rules 37 C.F.R. § 1.821-1.825.

Please direct any calls in connection with this application to the undersigned at (415) 781-1989.

Respectfully submitted,
FLEHR HOHBACH TEST
ALBRITTON & HERBERT LLP

Dated: 3/22/02

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Appendix A

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION:

The paragraph beginning on page 86, line 16, has been amended as follows:

--For engineering the multiple cloning site, pART27 was cut with SpeI and NotI. Ten picomoles of each of the two oligos whose sequence follows (TOP and BOTTOM) were annealed in 10 microlitres of water (heated to 80°C for 2 min and allowed to cool slowly to room temperature). The sticky ends on these annealed oligonucleotides allowed the insert to be cloned into pART27 (giving pART27mod) as described in Example No. 3 and 9. Sequence of oligonucleotide:

TOP: 5'-GGCCGCTTAATTAAGGATCCGGCGCGCCA-3' (SEQ ID NO: 54)

BOTTOM: 3'-CGAATTAATTCCTAGGCCGCGCGGTGATC-5 (SEQ ID NO: 55)--

The paragraph beginning on page 86, line 126 has been amended as follows:

--(The PacI recognition sequence is TTAATTAA ,SEQ ID NO: 56 and that for AscI is GGCGCGCC, SEQ ID NO: 57). A 4kbp SalI fragment from plasmid pART27mod (containing the right border, lacZ marker (+multiple cloning site)nptII gene for kanamycin resistance under control of the *nos* promoter and polyadenylation signal and the left border) was cloned into the 13kbp vector pKT231 linearised with XhoI. Plasmid pKT231 carries the IncQ origin of replication for the host *Agrobacterium tumefaciens* and a resistance (marker) gene for streptomycin/spectinomycin. (Bagdasarian, M. & Timmis, K.N. (1982) Curr. Topics Microbiol. Immunol. **96**, 46-67). These two fragments were ligated using standard protocols (eg in Example No 3) and transformed into *E.coli*

strain DH5α using standard protocols (eg in Example No 3). The resultant plasmid was named pJDML1.--

Delete the Sequence Listing on pages 97-139 and insert therefore the enclosed Sequence listing.

IN THE CLAIMS:

10. (Thrice Amended) An isolated nucleic acid molecule comprising a [nucleic acid] nucleotide sequence [hybridizable] selected from the group consisting of: [with RNA 1 (SEQ ID No: 39) or RNA 2 (SEQ ID No: 47) under low stringency conditions]

a) a nucleotide sequence set forth in SEQ ID NO:39;

b) a nucleotide sequence set forth in SEQ ID NO:47;

c) a nucleotide sequence encoding the amino acid sequence of SEQ ID NO: 40 or a replicase-encoding fragment thereof;

d) a nucleotide sequence encoding the amino acid sequence of SEQ ID NO: 50 or a coat protein-encoding fragment thereof;

e) a nucleotide sequence having at least 90% identity to a) and which encodes a replicase;

f) a nucleotide sequence having at least 90% identity to b) and which encodes a coat protein;

g) a nucleotide sequence which encodes a replicase which shares at least 90% amino acid sequence identity with SEQ ID NO: 40; and

h) a nucleotide sequence which encodes a coat protein which shares at least 90% amino acid sequence identity with SEQ ID NO: 50.

13. (Four times Amended) [The] An isolated nucleic acid molecule [of claim 10 wherein said] comprising a nucleotide sequence which encodes a polypeptide selected from the group consisting of: P7 (SEQ ID No: 54), P16 (SEQ ID No: 55), P17 (SEQ ID No: 48), P64 (SEQ ID No: 56), P70 (SEQ ID No: 52), P71 (SEQ ID No: 50), P11a (SEQ ID No: 42), P11b (SEQ ID No: 44), P14 (SEQ ID No: 46) or P187 (SEQ ID No: 40)[or a mutant, variant or derivative thereof].

19. (Twice Amended) [A] An expression or transfer vector comprising [the] at least one molecule of claim 10.

20. (Twice Amended) [A] An expression or transfer vector comprising [the] at least one molecule of claim 13.

25. (Thrice Amended) A vector comprising the molecule of claim 10 [capable of replication, expression and/or encapsidation] that replicates, expresses, or encapsidates in [an animal cell,] a plant cell[, yeast cell or bacterial cell].

26. (Amended) A vector comprising the molecule of claim 10 [capable of transferring] that transfers said nucleic acid molecule to a plant cell.

27. (Amended) The vector of claim 25 or claim 26 which comprises a ribozyme for facilitating replication, expression or encapsidation of the molecule.

28. (Amended) The vector of claim 25 or claim 26 wherein said ribozyme has a sequence selected from one of the following sequences:

5' CCATCGATGCCGGACTGGTATCCCAGGGGG (SEQ ID NO: 5)

5' CCATCGATGCCGGACTGGTATCCCGAGGGAC (SEQ ID NO: 6)

5' CCATCGATGATCCAGCCTCCTCGCGGCGCCGGATGGGCA (SEQ ID NO: 7)

5' GCTCTAGATCCATTCGCCATCCGAAGATGCCCATCCGGC (SEQ ID NO: 8)

5' CCATCGATTTATGCCGAGAAGGTAACCAGAGAAACACAC (SEQ ID NO: 9)

5' GCTCTAGACCAGGTAATATACCACAACGTGTGTTTCTCT (SEQ ID NO: 10).

30. (Amended) [A] <u>An expression or transfer</u> vector [according to claim 20 in which]<u>, wherein</u> the vector is selected from the group consisting of pDHVR1, pDHVR1RZ, pDHVR2, pDHVR2RZ, p17V71, p17E71, pPH, pV71, p17V64, p17E64, pP64, pV64, pBacHVR1, pBacHVR1RZ, pBacHUR2, pBacHVR2RZ, pHSPR1, pHSPR1RZ, pHSPR2, pHSPR2RZ, pSR1(E3)A, pSR1(E3)B, pSR2A, pSR2B, pSX2P70, pSXR2P70, pSRP2B, pBHVR1B, pBHVR2B, pT7T2P64, pSR2P70, pT7T2P65, pT7T2P70, pT7T2-P71, pBSKSE3, pBSR15, pBSR25p, pSR25, phr236P70, phr235P65, pGemP63N, pGemP64N, pGemP65N, pP64N, pP65H, pTP6MA, pTP6MF, pTP17, pTP17delBB, pP656 and p70G.

31. (Amended) A host cell comprising the vector of claim 19, <u>wherein said host cell is a plant cell</u>.

37. (Four times amended) A method of controlling insect attack [in] of a plant comprising [genetically manipulating] inserting into said plant [so that it is capable of producing HaSV or mutants, derivatives or variants thereof, or an insecticidally effective portion of HaSV, mutants, derivatives or variants thereof] a first nucleic acid molecule selected from the group consisting of:

a) a nucleotide sequence set forth in SEQ ID NO:39;

b) a nucleotide sequence encoding the amino acid sequence of SEQ ID NO: 40 or a replicase-encoding fragment thereof;

c) a nucleotide sequence having at least 90% identity to a) and which encodes a replicase;

d) a nucleotide sequence which encodes a replicase which shares at least 90% amino acid sequence identity with SEQ ID NO: 40;

and a second nucleic acid molecule selected from the group consisting of:

e) a nucleotide sequence set forth in SEQ ID NO:47;

f) a nucleotide sequence encoding the amino acid sequence of SEQ ID NO: 50 or a coat protein-encoding fragment thereof;

g) a nucleotide sequence having at least 90% identity to b) and which encodes a coat protein; and

h) a nucleotide sequence which encodes a coat protein which shares at least 90% amino acid sequence identity with SEQ ID NO: 50,

wherein the plant produces HaSV viral particles, such that insects feeding on the plant are deleteriously effected.

38. (Four Times amended). A transgenic plant [resistant to insect attack] comprising [a genome or subgenome capable of expressing the] at least one nucleic acid molecule of claim 10 [such that the transgenic plant produces HaSV or mutants, derivatives or variants thereof, or an insecticidally effective portion of HaSV, mutants, derivatives or variants thereof such that insects feeding on the transgenic plant are deleteriously effected].

Appendix B

PENDING CLAIMS

10. (Thrice amended) An isolated nucleic acid molecule comprising a nucleotide sequence selected from the group consisting of:

a) a nucleotide sequence set forth in SEQ ID NO:39;

b) a nucleotide sequence set forth in SEQ ID NO:47;

c) a nucleotide sequence encoding the amino acid sequence of SEQ ID NO: 40 or a replicase-encoding fragment thereof;

d) a nucleotide sequence encoding the amino acid sequence of SEQ ID NO: 50 or a coat protein-encoding fragment thereof;

e) a nucleotide sequence having at least 90% identity to a) and which encodes a replicase;

f) a nucleotide sequence having at least 90% identity to b) and which encodes a coat protein;

g) a nucleotide sequence which encodes a replicase which shares at least 90% amino acid sequence identity with SEQ ID NO: 40; and

h) a nucleotide sequence which encodes a coat protein which shares at least 90% amino acid sequence identity with SEQ ID NO: 50.

13. (Four times amended) An isolated nucleic acid molecule comprising a nucleotide sequence which encodes a polypeptide selected from the group consisting of: P7 (SEQ ID NO: 54), P16 (SEQ ID NO:55), P17 (SEQ ID No: 48), P64, P70 (SEQ ID No: 52), P71 (SEQ ID No:

50), P11a (SEQ ID No: 42), P11b (SEQ ID No: 44), P14 (SEQ ID No: 46), and P187 (SEQ ID No: 40).

19. (Twice amended) An expression or transfer vector comprising at least one molecule of claim 10.

20. (Twice amended) An expression or transfer vector comprising at least one molecule of claim 13.

25. (Thrice amended) A vector comprising the molecule of claim 10 that replicates, expresses or encapsidates in a plant cell.

26. (Amended) A vector comprising the molecule of claim 10 that transfers said nucleic acid molecule to a plant cell.

27. (Amended) The vector of claim 25 or claim 26 which comprises a ribozyme for facilitating replication, expression or encapsidation of the molecule.

28. (Amended) The vector of claim 25 or claim 26 wherein said ribozyme has a sequence selected from one of the following sequences:

5' CCATCGATGCCGGACTGGTATCCCAGGGGG (SEQ ID NO: 5)

5' CCATCGATGCCGGACTGGTATCCCGAGGGAC (SEQ ID NO: 6)

5' CCATCGATGATCCAGCCTCCTCGCGGCGCCGGATGGGCA (SEQ ID NO: 7)

5' GCTCTAGATCCATTCGCCATCCGAAGATGCCCATCCGGC (SEQ ID NO: 8)

5' CCATCGATTTATGCCGAGAAGGTAACCAGAGAAACACAC (SEQ ID NO: 9)

5' GCTCTAGACCAGGTAATATACCACAACGTGTGTTTCTCT (SEQ ID NO: 10).

30. (Amended) An expression or transfer vector, wherein the vector is selected from the group consisting of: pDHVR1, pDHVr1RZ, pDHVR2, pDHVR2RZ, p17V71, p17E71, pPH, pV71, p17V64, pP64, pV64, pBacHVR1, pBacHVR1RZ, pBacHUR2, pBacHVR2RZ, pHSPR1, pHSPR1RZ, pHSPR2, pHSPR2rZ, pSR1(E3)A, PSR1(E3)B, pSR2A, pSR2B, pSX2P70, pSRP2B, pBHVR1B, pBHVR2B, pT7T2P64, pSR2P70, pT7T2P65, pT7T2P70, pT7T2-P71, pBSKSE3, pBSR15, pBSR25p, pSR25, phr236P70, phr235P65, pGemP63N, pGemP64N, pGemP65N, pP64N, pP65H, pTP6MF, pTP17, pTP17delBB, pP656 and p70G.

31. (Amended) A host cell comprising the vector of claim 19, wherein the host cell is a plant cell.

37. (Four times amended) A method of controlling insect attack of a plant comprising inserting into the plant a first nucleic acid molecule selected from the group consisting of:

a) a nucleotide sequence set forth in SEQ ID NO:39;

b) a nucleotide sequence encoding the amino acid sequence of SEQ ID NO: 40 or a replicase-encoding fragment thereof;

c) a nucleotide sequence having at least 90% identity to a) and which encodes a replicase; and

d) a nucleotide sequence which encodes a replicase which shares at least 90% amino acid sequence identity with SEQ ID NO: 40;

and a second nucleic acid molecule selected from the group consisting of:

e) a nucleotide sequence set forth in SEQ ID NO:47;

f) a nucleotide sequence encoding the amino acid sequence of SEQ ID NO: 50 or a coat protein-encoding fragment thereof;

g) a nucleotide sequence having at least 90% identity to b) and which encodes a coat protein; and

h) a nucleotide sequence which encodes a coat protein which shares at least 90% amino acid sequence identity with SEQ ID NO: 50,

wherein the plant produces HaSV viral particles, and insects feeding on the plant are deleteriously effected.

38. (Four times amended) A transgenic plant comprising at least one nucleic acid molecule of claim 10.